Reengineering of Libraries: Issues and Trends

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Abstract: We are living in the age of electronic information, where improvements in technology are re-engineering the global information industry. With the help of technology, Reengineering process has changed the entire concept of libraries from holding to access. It is not just a matter of improving the techniques in processing and providing dissemination of information to their users but it is more a task of retrospective system & services as well as changing pattern of information management through application of technology and scientific management. In this changing scenario, objectives, roles and functions of libraries and librarians need to change and be redesigned, if librarianship as a profession is to survive in the coming society. The main objective of this paper is to emphasize library in-house operation and re-engineers the same through innovative user centred library services.

KEYWORDS: Re-engineering, Internet, OPAC

1.0 Introduction

India is gradually emerging into an information age. Knowledge & technical skills are becoming the central base for development. Libraries and Librarianship in India in 21st century are undergoing a transformation in modernizing and reshaping their collections, services and manpower. It is a new beginning of the technological application and scientific management to the modification of existing system, organizations, processes and products in order to make them more effective, efficient, and responsive. Reengineering have brought revolutionary changes in the handling, delivering and storage of information. It is an amalgamation of computer, communication, printing and reprographic technologies. Library system with digital or virtual collections transforms traditional librarians into a modern one with new opportunities and challenges. The internet has given the librarians a new dynamic role to play in the society and serve the new information based services in better ways than before. Reengineering system has affected each and every area that is being carried out in libraries. Introduction of innovation like networking, internet, intranet and video conferencing has created a multifaceted potential for libraries. It has also altered the mode of publication where the printed materials are replaced with electronic publications. The most significant advantage of electronic resources is that they can be accessed from anywhere, anytime and by any numbers of people for desired information. It has facilitated the design of new library by making the delivery of information quicker, convenient and efficient than ever before with the users more adaptable to computers and the falling prices of hardware, which has resulted in computerization of many functions. In today’s library re-engineering entails automation, introduction of online journals, in-house databases of different collections, Internet information services, man power development, sufficient financial grants, proper planning and management, bar-coding or RFID tags use in books and back vols. of journals for expeditious transactions in circulation counter or with the re-engineering of networking technology, the library could be extended to the users community at their desktops without much physical environment to justify the realization of five laws of library science laid down by Dr. S.R. Ranganathan. With the help of library automation package, the house keeping tasks can be performed faster with extra benefits in terms of time saving and multiple report generation which is unattainable in the manual system. The automation system facilitate users to use the library resources and services with very little staff assistance if the collection is properly arranged in the stacks and orientation program is conducted for users for better use of resources.

1.1 Concept of Re-engineering

Re-engineering is the hottest issue in the nineties, as its application is increased in different fields. Re-engineering is a rapid and radical redesigning of process, services, policies and the organizational structure of an organization. It does not mean the using new computer systems in the existing system (i.e. replacing manual system). Rather, it is the modification of the existing system by the computer based system or a new human based system, and can even replace an existing computer based system with a human based system. It was first used by Michael Hammer in 1990 at a Harvard business review article, “Reengineering work: don’t automate obliterate.” Davenport has also
been considered as the pioneer of introducing the concept of re-engineering”. Michael Hammer and James Champy than further developed the concepts of re-engineering corporation (1993): “Re-engineering simply means rethinking and redesign of business process to achieve dramatic improvement in critical contemporary measures of performance, such as cost, quality, service and speed.” Microsoft Computer Dictionary defines the term ‘Reengineer’ as ‘To rethink and redefine processes and procedures.’ Encyclopaedia of Information Technology defines reengineering as ‘the examination and modification of a system to reconstitute it in a new form and the subsequent implementation of the new form’. Daniel P. Petrozoo and John C. Stepper in their book “Successful Reengineering” define the term ‘Reengineering’ as ‘ Reengineering is the concurrent redesign of processes, organizations, and their supporting information systems to achieve radical improvement in time, cost, quality, and customers’ regard for the company’s products and services.’ Though this definition is based on the company environment; it is also applicable more or less in Library and Information System and Services. Here, in the LIS environment, the term Customer is replaced with the term User and term Company will be replaced with Library and Information Centre.

1.2 Why need Re-engineering
- To create efficient service
- To provide accurate service
- To control the rapid growth of information
- Capable of satisfying the users
- Proved to be economical

1.3 Impact of Reengineering on Libraries
Since the beginning of human civilization, the mankind started expressing in writing and strived for documented information and knowledge, the libraries came into existence. The activities of the libraries become multifunctional as the civilization flourished. Starting from libraries in the Monasteries in 7th century to the trendy virtual libraries in 21st century, libraries have made a smooth transition through clay tablet, papyrus, bhujapatra, paper and high tech audiovisual media. The functioning and services of libraries have changed drastically. With the development and application of ICT, whole scenario of libraries has been changed. Today’s Library and Information Centre has passed a long evolutionary sequence. The following list indicates the growth of libraries.
- Monasteries
- Storehouse of knowledge
- Libraries and Information centre

1.4 RE-ENGINEERING OF LIBRARY COLLECTION
In order to cope the challenges of multidimensional information needs of the library users, the library collection should be built in digital format. It may include:
- CDs, DVDs, microfilms, etc;
- E-books, e-journals;
- E-databases;
- E-reference sources;
- Membership with e-consortia

1.5 RE-ENGINEERING OF LIBRARY OPERATIONS
For efficient library housekeeping operations, a library should be automated with standard Library software. With the help of information technology, the library housekeeping operations will be redesigned in the following manner:
- Automated acquisition system
- Automated cataloguing system
- Automated circulation system
- Automated serials control system
- Automated reporting system
- Automated stock verification system
- Automated document searching through online catalogue.

1.6 Benefit of Re-Engineering in Academic Libraries
Re-engineering is beneficial to academic libraries like:
- Users expected library services
- Increase the library users and library use
- Save the time of users
- Change in traditional practices which are replaced by using technology
- Better Library Management
- Greater library cooperation
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1.7 Disadvantage of Re-engineering Library system:
- Protection of records
- Report production
- Costly as compare to traditional pattern.
- Re-engineering obsolescence (Hardware and Software).
- Storage Media.
- Dominance of data creators and publishers.
- Trained manpower.
- User education and training.
- Security against hacking and sabotage

1.8 Challenges Faced By Academic Libraries
- Impact of ICT on Libraries.
- Explosive growth of information and documents.
- Increased cost of the documents and information materials.
- Increase in users information needs.
- New role of the librarian and greater responsibilities.
- Latest techniques and concepts in handling of information.
- New electronic information environment.
- Creation of databases and its security.
- Marketing of library and information services.

Academic libraries play a central role in facilitating dissemination and creation of new knowledge.

1.9 Skill Requirement for the Library Professionals in Re-engineering:
- The re-engineering environment made the librarians to acquire new competencies and skill regarding:
- New re-engineering innovations such as INTERNET.
- Professional skills with practical approach.
- Cataloguing of web resources using metadata standards.
- Web page designing and maintenance.
- Preservation of Re-engineering resources.
- Data base creation and various models of it.
- Attending to the trouble shooting systems.
- Scanning, indexing, conversion and linkage issues.
- To work in the re-engineering environment by using it today.
- Turning to the new environment by using IT tools.
- User awareness to the library resources and services.
- Accessibility of on-line information.
- Improving the communication skill among the staff, with user and the top management.
- Strengthening of librarians skills in dealing with copyright and negotiating with publishers.
- High priority must be given to staff development.
- Through task skill training, boot camps, workshop on different themes, and
- Demonstration of IT, Products, Seminars and Webinars on staff competency.

2.0 Changing Role of Library & Information Service Professionals

In the Modern World, the role of the LIS professionals is adapting to changing technologies, information environment and customers expectations. Library professionals are increasingly responsible not only to provide traditional library information services but also to deliver online information services according to the actual user needs. Librarians need to keep up with their users’ expectations to survive and service them. Librarians need to become information knowledge navigators who distill data into usable information. In the 21st century, everyone is going through many occupational changes to face the future challenges. Information and Communication Technology has transformed the role of not only libraries but also library professionals in the changing environment in which they now work. Library professionals are functioning under great pressure to become more efficient to deliver more effective services to the users. The LIS professional must cope up the challenges arose by the pose of ICT in the present context. LIS professionals need to be so confident and competent that they can prepare themselves for new challenges, deal with emerging technologies, manage change effectively and claim new professional roles. A well-informed competent and creative LIS professional shall play multiple evolving roles in the 21st century.

Librarians become fearful with the change of the expectation of information users in volatile information industry. As we race into the future, librarians should begin to think about the position of the library in the new environment. LIS professionals are functioning under great pressure to keep pace with the constantly changing technological environment. Today, Librarians have...
to play multiple evolving and expanding roles to face many new challenges in the dynamic technological environment. A librarian must be a professional expert, technologically literate, web usability expert, knowledge manager, information manager, navigator, trainer, educator, marketer, service provider and many more.

2.1 Future of Library Professionals

Reengineering system is rapidly changing the whole world, creating new challenges and opportunities. Library professionals have to face many complex challenges, make use of the technological opportunities and respond to all these changes positively. LIS professionals with latest technological competencies are in great demand. They have great opportunities and bright career prospects as long as they improve their professional and technological competencies and grab them. Otherwise, it becomes even difficult to survive in the modern libraries. Those professionals that anticipate and embrace change constructively, creatively and intelligently will be the ones, who are most likely to survive, prosper, develop and succeed rather than decline and suffer in the future. LIS professionals need vision for modern professional skills and technological competencies in order to have bright future in the 21st Century.

2.2 Conclusion

Today Reengineering has brought revolutionary changes in the whole world of information at each and every moment. This revolutionary change is also prevalent in the case of libraries and information centres. So, application of Reengineering is an indispensable part of modern library system development, organization, management and services. It is fundamentally important for the future of libraries and the ultimate creation of a true library without walls. It introduce new ways of information handling, it also brings about change in the primarily structure of information and its communication.

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